

WILD TYPE *B. subtilis* *rib* OPERON

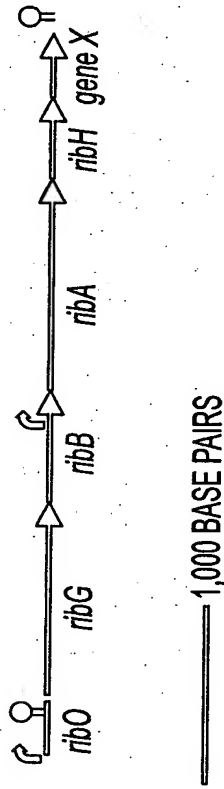


FIG. 1A

ENGINEERED *rib* OPERON AND CHLORAMPHENICOL RESISTANCE GENE (CMR) OF pRF69

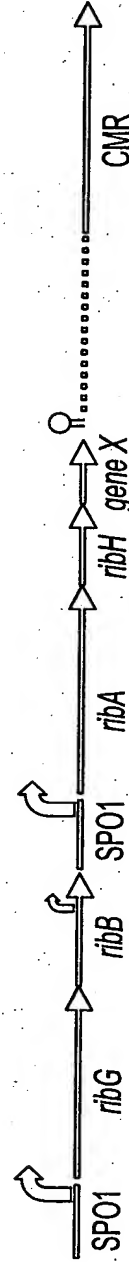


FIG. 1B

VEGETATIVE sigmaA PROMOTER

CONSTITUTIVE PHAGE SPO1 PROMOTER, P15

RNA LEADER W/ATTENUATOR,

RHO-INDEPENDENT TERMINATOR

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CONSTITUTIVE PHAGE SPO1 PROMOTER, P15

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BIOSYNTHESIS OF RIBOFLAVIN

6,7-DIMETHYL-8-RIBITYLLUMAZINE

DRML

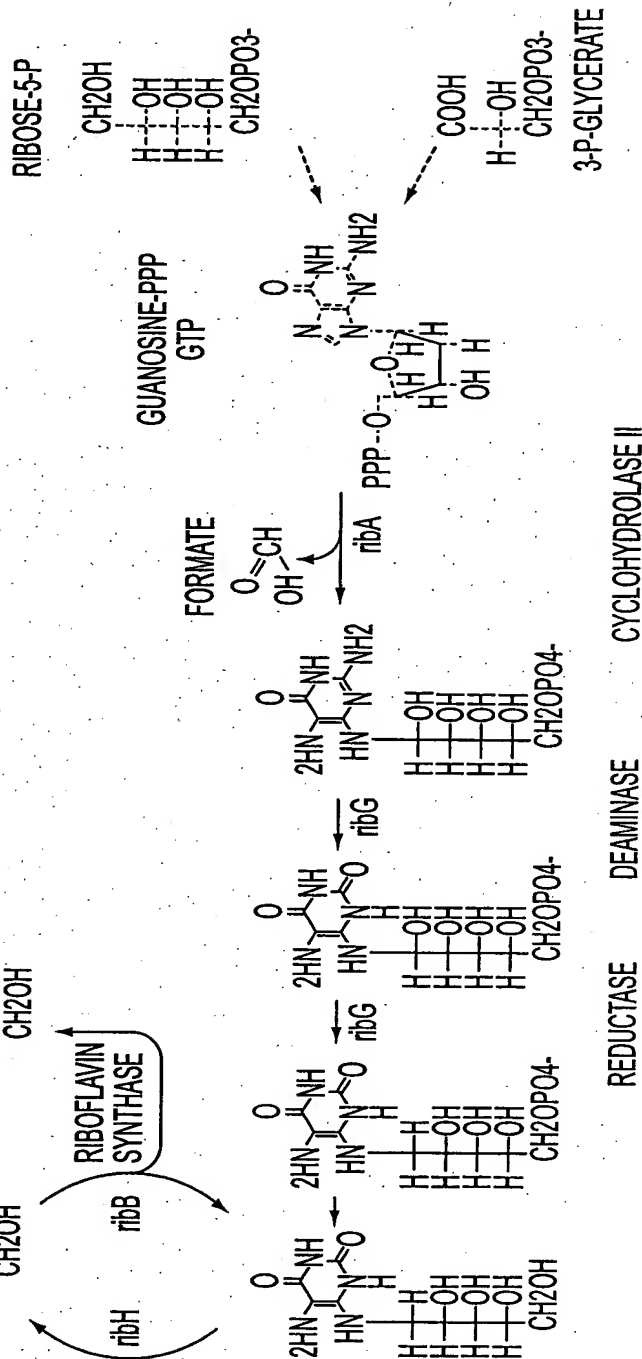
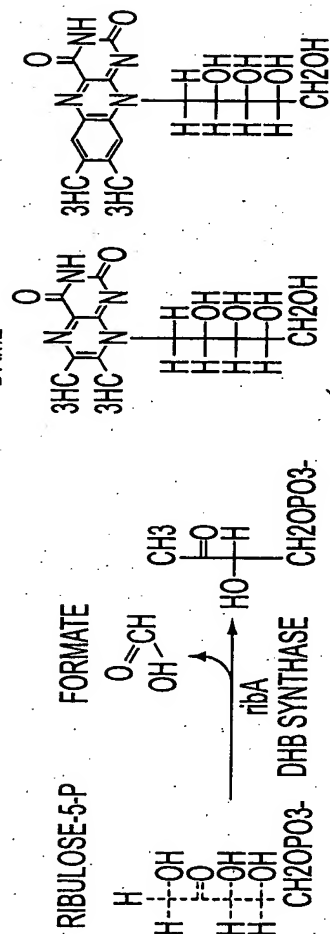


FIG. 2

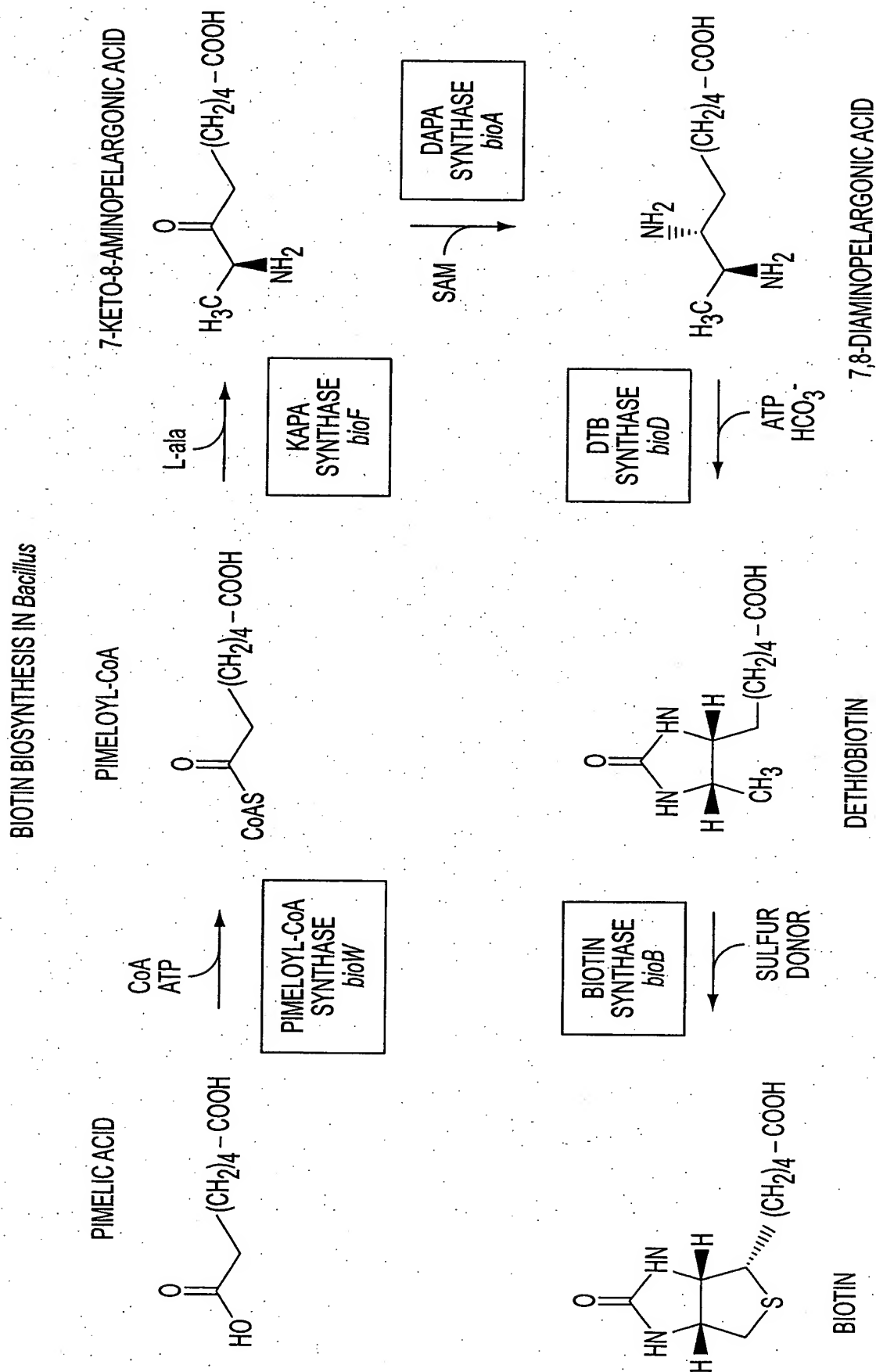
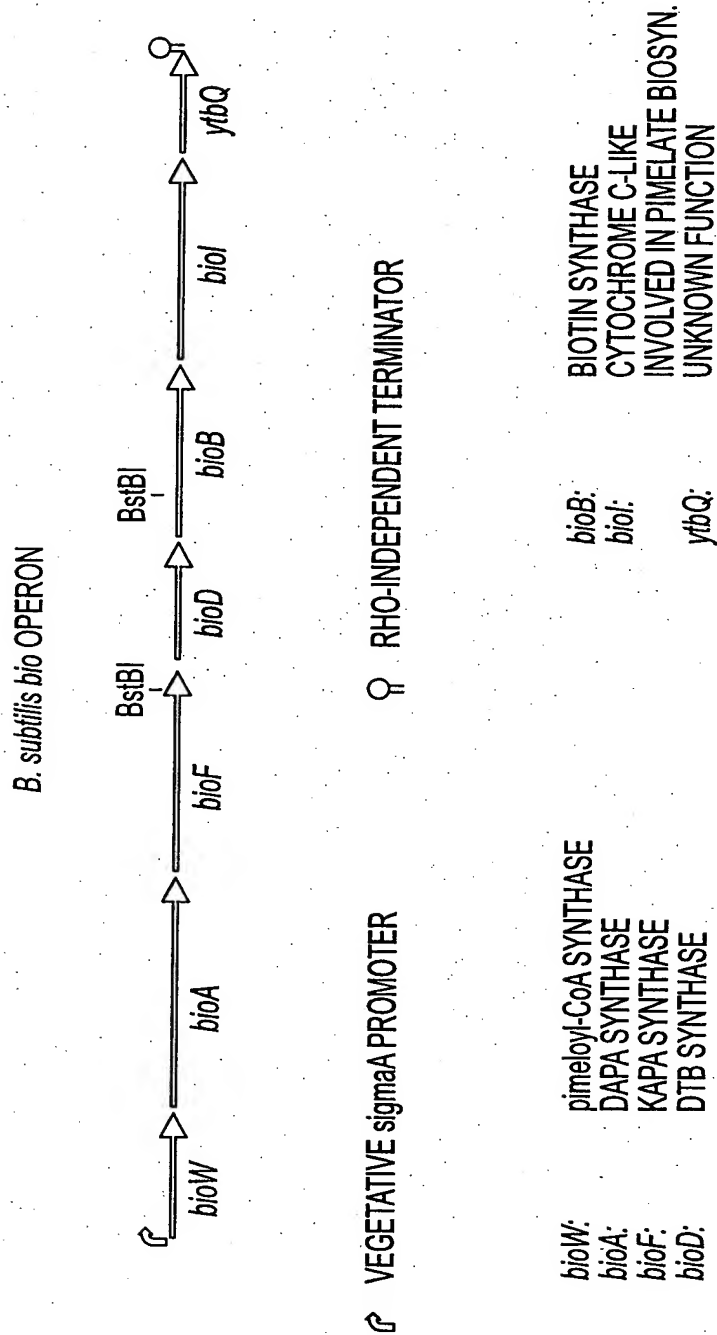


FIG. 3



IN RB50::[pRF69] *BIO* THE 3' END OF *bioF*, COMPLETE *bioD*, AND THE 5' END OF *bioB*
(THE DNA SEQUENCE BETWEEN THE 2 BstBI SITES INDICATED IN THE DRAWING) WAS
REPLACED BY A NEOMYCIN RESISTANCE GENE

FIG. 4